

UNITED STATES PATENT AND TRADEMARK OFFICE  
**CERTIFICATE OF CORRECTION**

PATENT NO. : 6,887,896 B1  
APPLICATION NO. : 10/696748  
DATED : May 3, 2005  
INVENTOR(S) : Beard et al.

Page 1 of 14

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 4, Line 17, "shown un"  
should be --shown in--

Column 12, Line 54, "MinoxidilR"  
should be --Minoxidil<sup>R</sup>--

Column 21, Line 48, "(61)." should be --6H)--

Column 23, Line 3, "tetrahydro-2(J)-pyrimidinone"  
should be -- tetrahydro-2(1H)-pyrimidinone --

Column 23, Line 20, "dichloropalladium (I)"  
should be --dichloropalladium (II)--

Column 24, Line 17, "(Compound 16,335"  
should be --(Compound 16, 355--

Column 25, Line 54, "2.742.84"  
should be --2.74-2.84--

Column 27, Line 7, "36.89" should be --δ 6.89--

Column 27, Line 30, "6.106.24"  
should be --6.10-6.24--

Column 28, Line 50, "2.642.75"  
should be --2.64-2.75--

Column 29, Line 46, "2.742.83"  
should be --2.74-2.83--

Column 29, Line 55, "dimethyl-2H-chromen-6yl)<sub>3</sub>"  
should be --dimethyl-2H-chromen-6yl-3--

Column 30, Line 20, "methoxy-22-dimethyl"  
should be -- methoxy-2,2-dimethyl --

Column 41, Line 10, "(s, 10H)"  
should be --(s, 1H)--

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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 41, Line 22, "(m, If,"  
should be --m, 1H),--  
Column 41, Line 32, "(s, if),"  
should be --(s, 1H),--

Column 41, Line 46, "(t, J 57.2 Hz, 3H)"  
should be --(t, J=7.2 Hz, 3H) --

Column 41, Line 55, "-78DC." should be -- -78°C --

Column 41, Line 63, "2.0 $\mu$ M" should be --2.0M --

Column 42, Line 12, "I-(Isopropyl)"  
should be -- I-(4-Isopropyl --

Column 42, Line 58, "(s, If),"  
should be --(s, 1H),--

Column 45, Line 17-18, "Ethyl (2E)-2-fluoro-3-[(4-isopropyl-2,2-dimethyl-7yl)-but-2-enoate (Compound 73)"  
should be --Ethyl (2E)-2-fluoro-3-[(4-isopropyl-2,2-dimethyl-7-propoxy-2*H*-chromen-6-yl)-but-2-enoate (Compound 73)--

Column 45, Line 45, "(s, 1 ul)," should be --(s, 1H),--

Column 45, Line 48, "(2E)<sub>3</sub>" should be --(2E)-3--

Column 46, Line 10, "Ethyl (2E)<sub>2</sub>-fluoro-3-(7-methoxy-22,4" should be -- Ethyl (2E)-2-fluoro-3-(7-methoxy-2,2,4--

Column 47, Line 35, "(m, 10H)" should be --(m, 1H)--

Column 48, Line 28, "11.0" should be --1.10--

Column 48, Line 50, "chromen-6yl)<sub>2</sub>"  
should be --chromen-6yl)-2--

Column 51, Line 3, "6.50 (s, 1H,"  
should be --6.50 (s, 1H), --

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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 52, Line 48, "1.35 (s, 614)," should be --1.35 (s, 6H),--

Column 52, Line 66, "6.42 (s, 1 ul)," should be --6.42 (s, 1H),--

Column 53, Line 16, "(dd, J 15.5, 25.5 Hz, 1H)," should be --(dd, J=15.5, 25.5 Hz, 1H),--  
Column 55, Line 23, "(in, 21), 2.05 (s, 31)" should be --(m, 2H), 2.05 (s, 3H),--

Column 55, Line 53, "(300 M-z" should be --(300 MHz--

Column 56, Line 8, "2.46" should be --2,4,6--

Column 57, Line 33, "11.25 br s, 1H)," should be --11.25 (br s, 1H),--

Column 58, Line 17, "ten-butyl" should be -- *tert*-butyl --

Column 58, Line 26, "2.402.60" should be --2.40-2.60--

Column 58, Line 40, "11.25 br s, 1H)," should be --11.25 (br s, 1H),--

Column 60, table 3, compound no. 121, RAR Bind. Ki nM under  $\beta$ , table 3, compound no.121, RAR Bind. Ki nM under  $\beta$ ), "46620" should be --4662(0)--???????

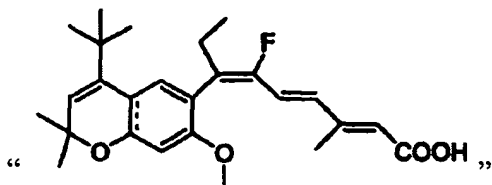
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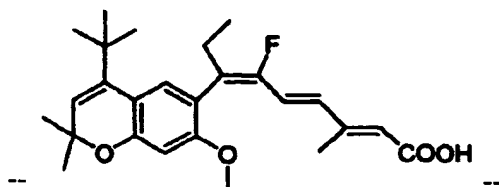
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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 63, compound no.131 in TABLE 3



should be



Column 67, Line 67, “(sept, 36.2 Hz”  
should be --(sept. J=6.2 Hz --

Column 68, Line 26, “2.842.87” should be --2.84-2.87--

Column 68, Line 36, “2.842.87” should be --2.84-2.87--

Column 70, Line 7, “3.984.02” should be --3.98-4.02--

Column 70, Line 7, “2.742.76” should be --2.74-2.76--

Column 70, Line 32, “1) and” should be --) and--

Column 71, Line 40, “(d, J=6.8Hz, 6-H),”  
should be --(d, J=6.8Hz, 6 H),--

Column 71, Line 42, “1.H),” should be --1 H),--

Column 71, Line 52, “0.101” should be --0.10--

Column 71, Line 57, “8 ppm” should be --δ ppm--

Column 71, Line 59, “4.44-(sept,” should be --4.44 (sept,--

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Column 72, Line 54, "6-Y1)" should be --6-yl)--  
Column 73, Line 23, "(m, 21H)," should be --(m, 2H),--

Column 73, Line 37, "66.83" should be --δ 6.83--

Column 74, Line 6, "(in, 1H)" should be --(m, 1H)--

Column 74, Line 7, "3.75-(s, 3H)"  
should be --3.75 (s, 3H)--

Column 74, Line 29, "7L(8" should be --7-(8--

Column 74, Line 57, "7-isopropoxy-2,2-methyl"  
should be --4-isopropoxy-2,2-dimethyl --

Column 81, Line 55, "2(1)]-pyrimidinone"  
should be --2(IH)-pyrimidinone --

Column 82, Line 47, "J=0 Hz"  
should be -- J=10 Hz --

Column 83, Line 25, "General Procedure B"  
should be --General Procedure B-1--

Column 83, Line 59, "I=5Hz" should be -- J=5Hz --

Column 84, Line 33, "(s, 1H." should be --(s, 1H).--

Column 84, Line 52, "(s, 1H." should be --(s, 1H).--

Column 87, Line 46, "33:1" should be --3.3 :1--

Column 91, Line 39, "7-bromo-ethoxy"  
should be --7-bromo-6-ethoxy--

Column 91, Line 58, "NH<sub>4</sub>C)" should be --NH<sub>4</sub>Cl--

Column 94, Line 13, "(m. 2H)" should be --(m, 2H)--

Column 96, Line 1, "1-(4-dimethyl"  
should be --1-(4,4-dimethyl --

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Column 96, Line 2, "isopropyl-3.,"  
should be -- isopropyl-3,4--

Column 96, Line 8 "palladium (1)"  
should be -- palladium (II)--

Column 96, Line 12, "δ 60.39" should be --δ 0.39--

Column 96, Line 40, "In ol)" should be --mmol--

Column 98, Line 17, "0.67 (q, 2H, 32 4.5 Hz),"  
should be --0.67 (q, 2H, J=4.5 Hz),--

Column 98, Line 18, "2.14 ((d" should be --2.14 (d --

Column 98, Line 19, "3=6.5Hz" should be --J=6.5Hz--

Column 98, Line 41, "Ethyl (2E63"  
should be --Ethyl (2E)-3--

Column 98, Line 45, "F-11" should be --F-1--

Column 99, Line 3, "60.89" should be --δ 0.89--

Column 99, Line 60, "(T, 2H)" should be --(m, 2H)--

Column 102, Line 7, "(Compound A-42)"  
should be --(Compound A-62)--

Column 102, Line 23, "dimethyl-(cyclopropyl)"  
should be -- dimethyl-6-(cyclopropyl)--

Column 103, Line 24, "(Compound A-47)"  
should be --(Compound A-67) --

Column 104, Line 3, "2,4,6" should be --2,4,6--

Column 104, Line 59, "3,44" should be --3,4--

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Column 105, Line 3, "5:66" should be --5.66--

Column 105, Line 20, "J=36.5 Hz" should be --J=6.5 Hz--

Column 105, Line 26, "Ethyl (2E4E,6E)"  
should be --Ethyl (2E,4E,6E)--

Column 105, Line 34, "0.011mL" should be --0.01mL --

Column 106, Line 14, "2,4.6" should be --2,4,6--

Column 106, Line 31, "743-Ethoxy"  
should be --7-(3-Ethoxy --

Column 106, Line 58, "2.19-(m, 2H)"  
should be --2.19 (m, 2H)--

Column 106, Line 58, "2.40 (r q)" should be --2.40 (br q --

Column 106, Line 63, "4,4-dimethylethoxy"  
should be --4,4-dimethyl-6-ethoxy --

Column 106, Line 64, "methyl-2.4"  
should be --methyl-2,4--

Column 107, Line 26, "3-(4-dimethyl)"  
should be --3-(4,4-dimethyl --

Column 107, Line 28, "2,4.6" should be --2,4,6--

Column 107, Line 40, "7.02-(s, 1H)."  
should be --7.02 (s, 1H).--

Column 108, Line 19, "1.111 mmol"  
should be --1.11 mmol--

Column 108, Line 28, "(4,\$dimethyl)"  
should be --(4,4-dimethyl --

Column 108, Line 36, "(t; 3H" should be --(t, 3H --

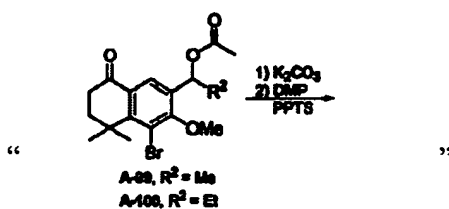
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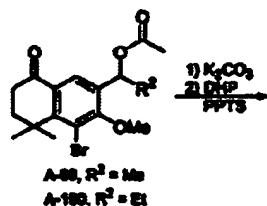
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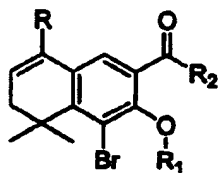
Column 114, Line 50,



should be --



Column 115, Lines 36-40 in the reaction scheme,



A-109, R=i-Pr, R<sub>1</sub>=Et, R<sub>2</sub>=Me } LDA  
 A-110, R=i-Pr, R<sub>1</sub>=Et, R<sub>2</sub>=Et } MeI  
 A-111, R=i-Pr, R<sub>1</sub>=Et, R<sub>2</sub>=i-Bu }  
 A-112, R=i-Pr, R<sub>1</sub>=i-Pr, R<sub>2</sub>=Me  
 A-113, R=i-Pr, R<sub>1</sub>=n-Pr, R<sub>2</sub>=Me  
 A-114, R=t-Bu, R<sub>1</sub>=Et, R<sub>2</sub>=Me  
 A-115, R=t-Bu, R<sub>1</sub>=i-Pr, R<sub>2</sub>=Me  
 A-116, R=s-Bu, R<sub>1</sub>=Et, R<sub>2</sub>=Et

“

”

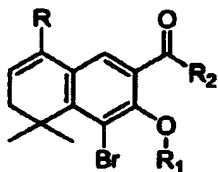


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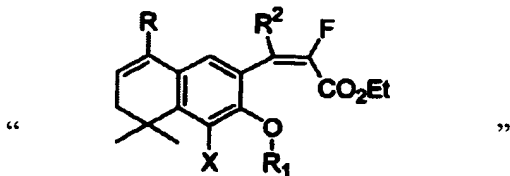
A-109, R=i-Pr, R<sub>1</sub>=Et, R<sub>2</sub>=Me } LDA  
 A-110, R=i-Pr, R<sub>1</sub>=Et, R<sub>2</sub>=Et } MeI  
 A-111, R=i-Pr, R<sub>1</sub>=Et, R<sub>2</sub>=i-Pr }  
 A-112, R=i-Pr, R<sub>1</sub>=i-Pr, R<sub>2</sub>=Me  
 A-113, R=i-Pr, R<sub>1</sub>=n-Pr, R<sub>2</sub>=Me  
 A-114, R=t-Bu, R<sub>1</sub>=Et, R<sub>2</sub>=Me  
 A-115, R=t-Bu, R<sub>1</sub>=i-Pr, R<sub>2</sub>=Me  
 A-116, R=s-Bu, R<sub>1</sub>=Et, R<sub>2</sub>=Et

should be --

--

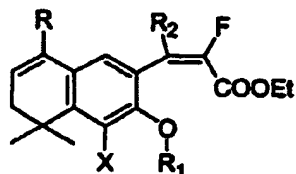
Column

117, Lines 25- 34 in the reaction scheme,



should be --

--



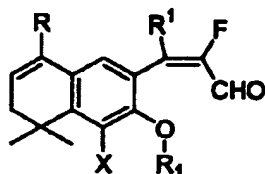
Column 118, in the reaction scheme row 1,

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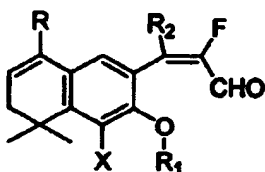
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A-146 (R=i-Pr, R<sub>1</sub>=Me, R<sub>2</sub>=Me, X=Br)  
 A-147 (R=i-Pr, R<sub>1</sub>=Et, R<sub>2</sub>=Me, X=Br)  
 A-148 (R=i-Pr, R<sub>1</sub>=Et, R<sub>2</sub>=Et, X=Br)  
 A-149 (R=i-Pr, R<sub>1</sub>=Et, R<sub>2</sub>=i-Pr, X=Br)  
 A-150 (R=i-Pr, R<sub>1</sub>=i-Pr, R<sub>2</sub>=Me, X=Br)  
 A-151 (R=i-Pr, R<sub>1</sub>=n-Pr, R<sub>2</sub>=Me, X=Br)  
 A-152 (R=i-Bu, R<sub>1</sub>=Et, R<sub>2</sub>=Me, X=Br)  
 A-153 (R=t-Bu, R<sub>1</sub>=i-Pr, R<sub>2</sub>=Me, X=Br)  
 A-154 (R=s-Bu, R<sub>1</sub>=Et, R<sub>2</sub>=Et, X=Br)  
 A-155 (R=i-Pr, R<sub>1</sub>=Et, R<sub>2</sub>=Me, X=Cl)  
 A-156 (R=i-Pr, R<sub>1</sub>=Et, R<sub>2</sub>=Et, X=Cl)



A-146 (R=i-Pr, R<sub>1</sub>=Me, R<sub>2</sub>=Me, X=Br)  
 A-147 (R=i-Pr, R<sub>1</sub>=Et, R<sub>2</sub>=Me, X=Br)  
 A-148 (R=i-Pr, R<sub>1</sub>=Et, R<sub>2</sub>=Et, X=Br)  
 A-149 (R=i-Pr, R<sub>1</sub>=Et, R<sub>2</sub>=i-Pr, X=Br)  
 A-150 (R=i-Pr, R<sub>1</sub>=i-Pr, R<sub>2</sub>=Me, X=Br)  
 A-151 (R=i-Pr, R<sub>1</sub>=n-Pr, R<sub>2</sub>=Me, X=Br)  
 A-152 (R=i-Bu, R<sub>1</sub>=Et, R<sub>2</sub>=Me, X=Br)  
 A-153 (R=t-Bu, R<sub>1</sub>=i-Pr, R<sub>2</sub>=Me, X=Br)  
 A-154 (R=s-Bu, R<sub>1</sub>=Et, R<sub>2</sub>=Et, X=Br)  
 A-155 (R=i-Pr, R<sub>1</sub>=Et, R<sub>2</sub>=Me, X=Cl)  
 A-156 (R=i-Pr, R<sub>1</sub>=Et, R<sub>2</sub>=Et, X=Cl)

should be --

Column

119, Line 25, "1-2 g" should be --12g--

Column 124, Line 31, "2.881H)"  
 should be --2.88 (m, 1H)--

Column 124, Line 47, "(in, 3H)" should be --(m, 3H)--

Column 124, Line 60, "(r, 2H)" should be --(m, 2H)--

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Column 125, Line 1, "3, dihydro"  
should be --3,4-dihydro --

Column 125, Line 25, "1'-dimethyl"  
should be --1,1-dimethyl --

Column 126, Line 35, "1  $\mu$ l-dimethyl"  
should be --1,1-dimethyl--

Column 126, Line 66, "r purification"  
should be --after purification--

Column 127, Line 4, "7.34 (s," should be --7.34 (s,1H)--

Column 127, Line 12, " $\mu$ l" should be --mL--

Column 127, Line 66, "(s,1H," should be --(s,1H),--

Column 128, Line 49, " $^1\text{H}$  NM" should be -- $^1\text{H}$  NMR--

Column 129, Line 25, "2.3  $\mu$ mmol"  
should be --2.3 mmol--

Column 129, Line 65, "3.84.1" should be --3.8-4.1--

Column 130, Line 13, "3.63.9" should be --3.6-3.9--

Column 130, Line 15, "614" should be --6H--

Column 130, Line 30, "JF7.0 Hz"  
should be --J=7.0 Hz--

Column 130, Line 44, "3.904.10 (n"  
should be --3.90-4.10 (m --

Column 130, Line 47, "8-isoprpyl"  
should be --8-isopropyl --

Column 130, Line 63, "butyl-1-3-ethoxy"

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should be -- butyl-3-ethoxy --

Column 131, Line 24, "3.904.10"  
should be --3.90-4.10--

Column 131, Line 58, "3.894.05"  
should be --3.89-4.05--

Column 132, Line 1, "2(I)-pyrimidinone"  
should be --2(*II*)-pyrimidinone --

Column 132, Line 21, "(r, 4H)" should be --(m, 4H)--

Column 132, Line 44, "(2E>3" should be --(2E)3--

Column 134, Line 13, "24-enal" should be --2-enal--

Column 135, Line 51, "2-yl)1-6" should be --2-yl)-6--

Column 136, Line 4, "4E,6)" should be --4E,6E)--

Column 136, Line 18, "0.8 Hz" should be --J=4.8Hz--

Column 136, Line 44, "7-(bromo"  
should be --7-(4-bromo --

Column 136, Line 45, "2-yl)1)-6-fluoro"  
should be --2-yl)-6-fluoro--

Column 138, Line 13, "30.94" should be -- $\delta$  0.94--

Column 138, Line 17, "(s, if)" should be --(s, 1H)--

Column 139, Line 37, "2E" should be --2Z--

Column 139, Line 67, "3.84.0" should be --3.8-4.0--

Column 140, Line 18, "methyl" should be --dimethyl--

Column 145, Line 67, in Claim 1, below the structure "R<sup>4</sup>" should be --R<sub>4</sub>--

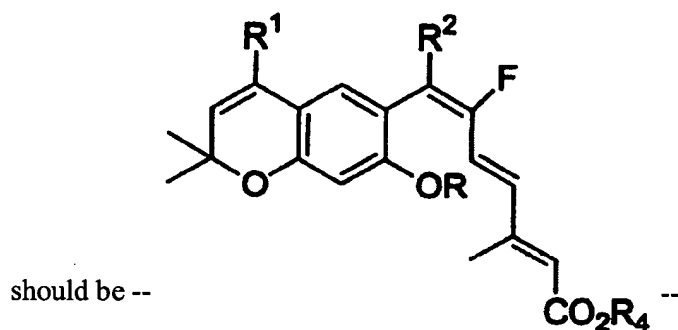
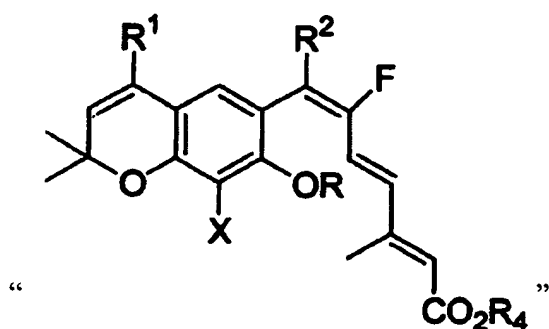
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Column 147, Line 40, claim no.21 21),



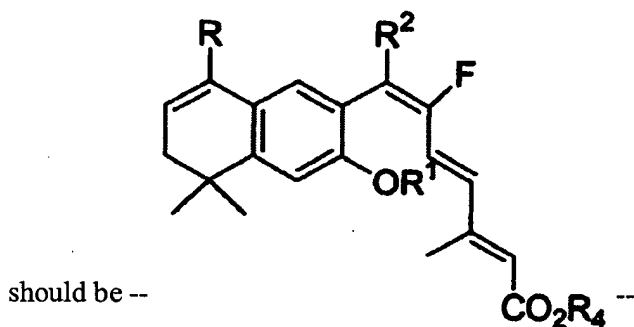
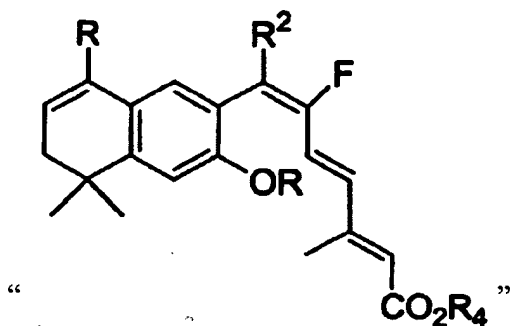
Column 149, claim no. 42,

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Signed and Sealed this

Twenty-fourth Day of October, 2006

JON W. DUDAS  
*Director of the United States Patent and Trademark Office*